=> d l14 abs ibib hitstr 1-10

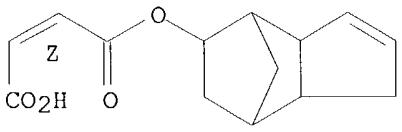
L14 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB The thermal polymerization of dihydrohyroxy-exo-dicyclopentadienyl and tetrahydrohydroxy-exo-dicyclopentadienyl maleates was carried out at 220° in the absence of any initiator to investigate quant. the mechanism of polymer formation. The characteristics of the thermal polymerization were discussed mainly with regarded to the average mol. weight, mol.-weight distribution, and 1H-NMR spectra of the products before and after hydrolysis. It seems that the presence of a double bond within the skeleton of dicyclopentadiene is necessary for the thermal polymerization to occur. This thermal polymerization is initiated by both radical chain reaction of the isomerized fumaroyl double bond and ene-reaction of the fumaroyl double bond with the allylic double bond in the cyclopentene ring. The radical chain reaction terminated rapidly at a d.p. <6. On the other hand, the ene-reaction trends to progress with increasing mol. weight of the polymer produced.

ACCESSION NUMBER: 1993:650616 CAPLUS
DOCUMENT NUMBER: 119:250616
TITLE: The study on **polyesters** by NMR spectrometry. IV. The thermal polymerization on dihydrohydroxy- and tetrahydrohydroxy-exo-dicyclopentadienyl maleates
AUTHOR(S): Tanaka, Hisao; Kageyama, Akira; Uchigasaki, Isao; Sugitani, Hatsuo; Mukoyama, Yoshiyuki
CORPORATE SOURCE: Yamazaki Works, Hitachi Chem. Co., Ltd., Hitachi, 317, Japan
SOURCE: Nippon Kagaku Kaishi (1993), (9), 1077-84
CODEN: NKAKB8; ISSN: 0369-4577
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
IT **151270-45-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and characterization of)
RN 151270-45-0 CAPLUS
CN 2-Butenedioic acid (2Z)-, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl) ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 29725-36-8
CMF C14 H16 O4

Double bond geometry as shown.



L14 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB The title compns., which cure with only a few minutes irradiation, contain salts of the cations [-OCH2CH(OH)CH2N(R1)ZN(R1)CH2CH(OH)CH2OR2] or [OCH2CH(OH)CH2N(R3)CH2CH(OH)CH2OR2] with (meth)acrylic, vinylacetic, crotonic, cinnamic, linoleic, or linolenic acids, dihydrodicyclopentadienol mono-2-butenoate, or unsatd. **polyesters**. A solution of bisphenol A epoxy resin-PhCH2NHCH2CH2NHCH2Ph adduct (mol. weight 17,000) 4.000, acrylic acid 0.993, and PhCOC(Ph)(OMe)2 0.049 g in 36

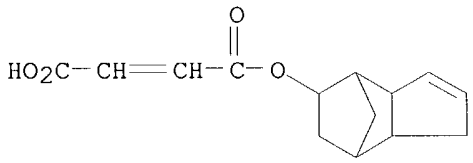
mL 4:1 CHCl3-MeOH was coated on glass, dried, and exposed to a 77.5-mW/cm2 lamp at a distance of 16 cm for 90 s to give a glossy, transparent, nontacky, solvent-resistant film.

ACCESSION NUMBER: 1990:160654 CAPLUS
DOCUMENT NUMBER: 112:160654
TITLE: Photocurable coating compositions containing polyfunctional quaternary ammonium salts
INVENTOR(S): Bellstedt, Klaus; Hoerhold, Hans Heinrich; Klemm, Elisabeth; Klee, Joachim
PATENT ASSIGNEE(S): Friedrich-Schiller-Universitaet, Ger. Dem. Rep.
SOURCE: Ger. (East), 4 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

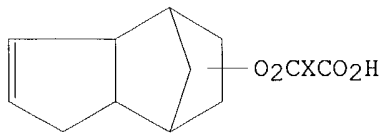
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 272309	A1	19891004	DD 1988-315745	19880513

PRIORITY APPLN. INFO.: DD 1988-315745 19880513

IT **116267-63-1DP**, salts with aminated epoxy resins
RL: PREP (Preparation)
(photocurable coatings, with short cure times, manufacture of)
RN 116267-63-1 CAPLUS
CN 2-Butenedioic acid, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl) ester (9CI) (CA INDEX NAME)



L14 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

AB The title **polyesters**, with low color, are prepared from hydroxydihydrodicyclopentadiene (I) monoesters of α,β-unsatd. dicarboxylic acids, polyols, saturated polybasic acids, and, optionally, α,β-unsatd. dicarboxylic acids containing brominated polyols and/or polybasic acids. Heating I maleate (1:1) (from 264 parts dicyclopentadiene) with maleic anhydride 98, dibromoneopentyl glycol 655, propylene glycol 190, phthalic anhydride 444, and hydroquinone 0.4 parts at 160° for .apprx.8 h gave an unsatd. **polyester**. A solution of **polyester** 1700, styrene 730, and epichlorohydrin 12 parts had viscosity 12.5 P, acid number 27.2, nonvolatiles 70.5%, and Gardner color 2-3.

ACCESSION NUMBER: 1989:633931 CAPLUS
DOCUMENT NUMBER: 111:233931
TITLE: Manufacture of fire-resistant unsaturated **polyesters**
INVENTOR(S): Tanaka, Kazuyuki; Iwami, Etsuji
PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01126315	A2	19890518	JP 1987-127779	19870525

PRIORITY APPLN. INFO.: JP 1987-127779 19870525

IT **123746-04-3P**
RL: PREP (Preparation)
(fire-resistant, with low color, manufacture of)

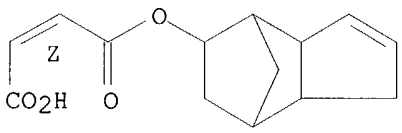
RN 123746-04-3 CAPLUS

CN 2-Butenedioic acid (2Z)-, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl) ester, polymer with 2,2-bis(bromomethyl)-1,3-propanediol, ethenylbenzene, 2,5-furandione, 1,3-isobenzofurandione and 1,2-propanediol (9CI) (CA INDEX NAME)

CM 1

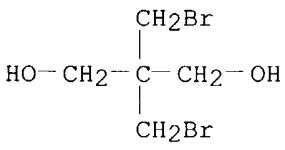
CRN 29725-36-8
CMF C14 H16 O4

Double bond geometry as shown.



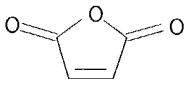
CM 2

CRN 3296-90-0
CMF C5 H10 Br2 O2



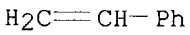
CM 3

CRN 108-31-6
CMF C4 H2 O3



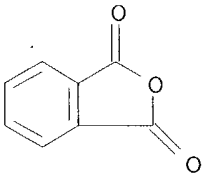
CM 4

CRN 100-42-5
CMF C8 H8



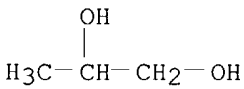
CM 5

CRN 85-44-9
CMF C8 H4 O3



CM 6

CRN 57-55-6
CMF C3 H8 O2



L14 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB Glass-glass or glass-metal adhesives based on methacrylate-diepoxide polymer systems are prepared by photocuring homogeneous mixts. of unsatd. **polyesters**, dioxolanyl methacrylate, and a bifunctional epoxide [e.g., bisphenol A diglycidyl ether (I) or bisphenol F diglycidyl ether] in presence of photoinitiators. Thus, a homogeneous adhesive mixture of 0.8 g unsatd. **polyester** (prepared from maleic anhydride, dicyclopentadiene, diethylene glycol), 1.6 g butane-diol 1,3-tetrahydrophthalic acid polymer, 0.8 g I, 0.24 g bisphenol A [2,2-bis(1,4,6-trioxaspiro[4.4]non-2-yl ether], 0.4 g benzyl alc., 3.76 g dioxolanyl methacrylate (stabilized with 200 ppm hydroquinone), 80 mg benzil dimethylketal, and 20 mg ditolyliodonium tetrafluoroborate was irradiated using a blue filter for 55 s to bond together 2 optical pieces.
ACCESSION NUMBER: 1988:511721 CAPLUS
DOCUMENT NUMBER: 109:111721
TITLE: Manufacture of adhesives for optical uses

INVENTOR(S): Wolf, Horst; Maertin, Rolf; Riesenberg, Evelin; Klemm, Elisabeth; Freitag, Werner; Safert, Werner; Lohs, Werner
PATENT ASSIGNEE(S): VEB Carl Zeiss, Ger. Dem. Rep.
SOURCE: Ger. (East), 6 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 247018	A1	19870624	DD 1986-287490	19860303

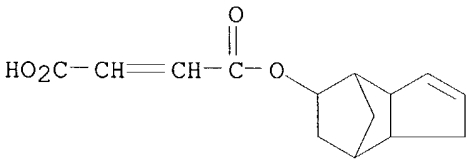
PRIORITY APPLN. INFO.: DD 1986-287490 19860303

IT **116267-64-2 116267-65-3**
RL: USES (Uses)
(adhesives containing, photocurable, for bonding optical materials)

RN 116267-64-2 CAPLUS
CN 2-Butenedioic acid, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl) ester, monoester with butanediol (9CI) (CA INDEX NAME)

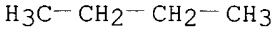
CM 1

CRN 116267-63-1
CMF C14 H16 O4



CM 2

CRN 25265-75-2
CMF C4 H10 O2
CCI IDS

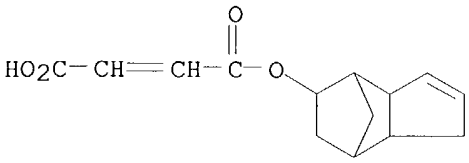


2 (D1—OH)

RN 116267-65-3 CAPLUS
CN 2-Butenedioic acid, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl) ester, monoester with 1,2,3-propanetriol (9CI) (CA INDEX NAME)

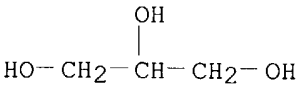
CM 1

CRN 116267-63-1
CMF C14 H16 O4



CM 2

CRN 56-81-5
CMF C3 H8 O3



L14 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB Unsatd. **polyesters** derived from the tricyclo[5.2.1.02,4]dec-4-enyl monoester of an unsatd. dicarboxylic acid, a bisphenol A-epichlorohydrin copolymer, and an unsatd. monocarboxylic acid are used in compns. with isocyanate-terminated polybutadiene (I) and polymerizable monomers for fiber-reinforced molding materials. Thus, a mixture of tricyclo[5.2.1.02,4]dec-4-enyl maleate (II) 123, methacrylic acid 86, Epikote 1004 475, hydroquinone 0.1, and benzyltrimethylammonium chloride 3 parts was heated 5 h at 120° to give a copolymer (III) [**80226-95-5**] having acid number 12. A composition of 70:30 III-styrene (IV) mixture 100, modified I (prepared from hydroxy-terminated I 1000, TDI 261, hydroquinone 0.1, and IV 500 parts) 15, tert-Bu benzoate 1.0, Zn stearate 4.0, and glass fibers 223 parts was placed between 2 polyethylene sheets and left 24 h at room temperature to give a tack-free sheet molding compound which was pressed 3 min at 150° and 80 kg/cm2 to form a board having flexural strength 45.5 kg/mm2, tensile strength 26.5 kg/mm2, elongation 2.5%, Charpy impact strength 165 kg-cm/cm2, and no whitening, compared with 41.7, 20.1, 1.8, 133, and some, resp., for a similar composition without II.

ACCESSION NUMBER: 1982:36260 CAPLUS
DOCUMENT NUMBER: 96:36260
TITLE: Sheet molding compounds
PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

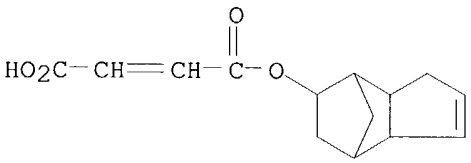
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56115308	A2	19810910	JP 1980-4015	19800116
JP 57040851	B4	19820831		

PRIORITY APPLN. INFO.: JP 1980-4015 19800116
IT **80226-95-5**
RL: USES (Uses)
(glass fiber-reinforced, sheet molding compds., containing isocyanate group-containing polybutadiene and styrene)
RN 80226-95-5 CAPLUS

CN 2-Butenedioic acid (2Z)-, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-6-yl) ester, polymer with (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

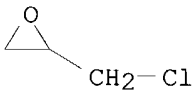
CM 1

CRN 27063-31-6
CMF C14 H16 O4



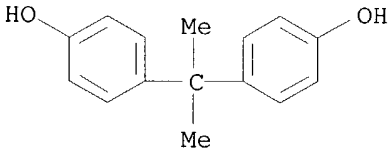
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



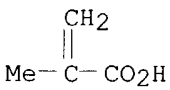
CM 3

CRN 80-05-7
CMF C15 H16 O2



CM 4

CRN 79-41-4
CMF C4 H6 O2



L14 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN

AB Unsatd. **polyesters** containing ≥20 mol % (based on total acid components) tricyclodecenyl maleate and(or) tricyclodecenyl fumarate and 15-80 mol % isophthalic acid or terephthalic acid are prepared after relatively short polymerization times. Thus, a mixture of Cydecanol maleate monoester 1.042, maleic anhydride 274, isophthalic acid 344, and propylene glycol 585 parts was heated in the presence of 0.01% hydroquinone to 210° in 5 h and kept there for 6 h to give copolymer (I) [**79104-51-1**] with acid number 29. A composition of I 74, styrene 26, Co naphthenate 0.5, 55% MeCOEt peroxide 1.0 part at 25° had gelation time 8 min, and the cured product (15 h at 50°) had flexural strength 17 kg/mm2, and water absorption 1.2%. Isophthalic acid-maleic anhydride-propylene glycol copolymer having similar acid number was prepared after 23 h of heating.

ACCESSION NUMBER: 1981:551631 CAPLUS
DOCUMENT NUMBER: 95:151631
TITLE: Unsaturated **polyesters**
PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56059822	A2	19810523	JP 1979-107607	19790822

PRIORITY APPLN. INFO.: JP 1979-107607 19790822

IT **79104-51-1P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of)

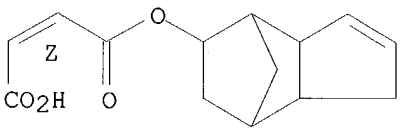
RN 79104-51-1 CAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 2,5-furandione, (Z)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl hydrogen 2-butenedioate and 1,2-propanediol (9CI) (CA INDEX NAME)

CM 1

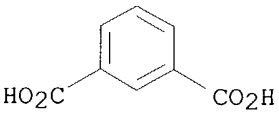
CRN 29725-36-8
CMF C14 H16 O4

Double bond geometry as shown.



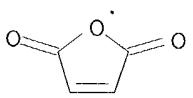
CM 2

CRN 121-91-5
CMF C8 H6 O4



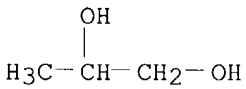
CM 3

CRN 108-31-6
CMF C4 H2 O3



CM 4

CRN 57-55-6
CMF C3 H8 O2



L14 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN

AB Compns. of 55-85 parts **polyester** [from >25 mol% (based on acid) tricyclo[5.2.1.02,6]dec-4-enyl maleate (I) and (or) fumarate, unsatd. dicarboxylic acids, 10-50 mol% saturated dicarboxylic acids, and polyols] and 15-45 parts crosslinking monomer are curable with reduced monomer loss by evaporation Thus, I 595, phthalic anhydride 118, maleic anhydride 78, and ethylene glycol 198 parts was heated in the presence of hydroquinone to give a copolymer [**73522-99-3**]. This resin is diluted with styrene to Gardner viscosity 4 s at 25° to give a composition having weight loss 25.4 mg (of 10g in a 60-mm-diameter dish at 25° in 30 min). This composition 50, 6% Co naphthenate 0.25, and 55% MEK peroxide 0.5 part give a room temperature-curing composition having gelation time 16 min and giving a cured product with water absorption 0.09% (24 h, 25°), boiling water resistance 72 h, flexural strength 8.6 kg/mm2, and flexural strength retention after 100 h in H2O at 96° 81%.

ACCESSION NUMBER: 1980:199312 CAPLUS
DOCUMENT NUMBER: 92:199312
TITLE: Unsaturated **polyester** molding compositions with reduced amounts of monomer evaporation
INVENTOR(S): Kageyama, Akira; Takamizawa, Shoji; Maekawa, Iwao; Uchigasaki, Isao
PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54159492	A2	19791217	JP 1978-68436	19780607
JP 56005766	B4	19810206		

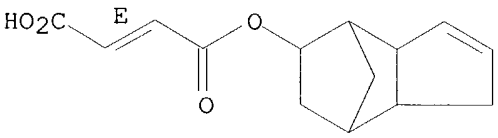
PRIORITY APPLN. INFO.: JP 1978-68436 19780607

IT **73522-99-3**
RL: USES (Uses)
(molding compns., with low crosslinking monomer loss)
RN 73522-99-3 CAPLUS
CN 2-Butenedioic acid (2E)-, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl) ester, polymer with 1,2-ethanediol, 2,5-furandione and 1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

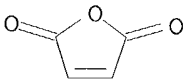
CRN 73522-98-2
CMF C14 H16 O4

Double bond geometry as shown.



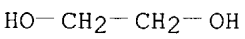
CM 2

CRN 108-31-6
CMF C4 H2 O3



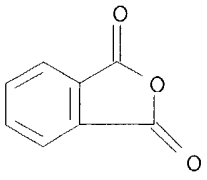
CM 3

CRN 107-21-1
CMF C2 H6 O2

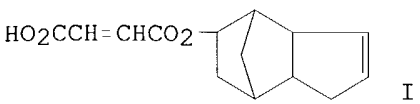


CM 4

CRN 85-44-9
CMF C8 H4 O3



L14 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

AB A maleate monoester, e.g., I [**29725-36-8**], prepared from dicyclopentadiene [77-73-6] or Cydecanol [133-21-1] and maleic anhydride (II) [108-31-6] or maleic acid [110-16-7], was esterified with a polyhydric alc. and, optionally, unsatd. fatty acids, and mixed with a crosslinking monomer, e.g.styrene [100-42-5], to prepare hardenable resins useful in the preparation of laminates, moldings, and coatings with good toughness, gloss, solvent resistance, and antiblocking properties. Thus, 784 parts II and 1200 parts Cydecanol were esterified at 140° to prepare I. A mixture of 124 parts HOCH2CH2OH [107-21-1] and 148 parts phthalic anhydride was polymerized at 210° to give a resin with acid number 9.1, which was mixed with 496 parts I, 0.01% hydroquinone, and 3% xylene, and the solution heated at 210° for 7 h to give an esterified oligomer with OH number 23.1. A mixture of 75% oligomer and 25% styrene had Gardner viscosity 2.8 s and was used with 30% glass fibers to prepare a hardened laminate with 0.07% water absorption during 24 h at 25°, 72 h resistance to water at 98°, and flexural strength 8.9 kg/mm2.

ACCESSION NUMBER: 1977:602537 CAPLUS
DOCUMENT NUMBER: 87:202537
TITLE: Resin composition
INVENTOR(S): Maekawa, Iwao; Uchigasaki, Isao; Kumazaki, Sakato; Takamizawa, Shouzi; Kageyama, Akira
PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
SOURCE: Ger. Offen., 31 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2708846	A1	19770908	DE 1977-2708846	19770301
DE 2708846	C2	19850704		
JP 52112632	A2	19770921	JP 1976-22874	19760302
JP 53031655	B4	19780904		
JP 55002211	B4	19800118	JP 1977-6935	19770125
US 4224430	A	19800923	US 1977-792003	19770428

PRIORITY APPLN. INFO.: JP 1976-22874 19760302
JP 1977-6935 19770125

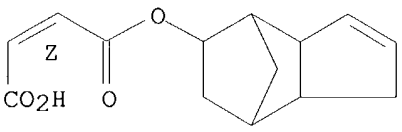
IT **64719-04-6 64719-17-1**
RL: USES (Uses)
(crosslinked, as coatings and moldings with improved chemical and mech. properties)

RN 64719-04-6 CAPLUS
CN Poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, ester with (Z)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl hydrogen 2-butenedioate (9CI) (CA INDEX NAME)

CM 1

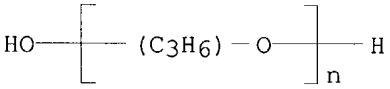
CRN 29725-36-8
CMF C14 H16 O4

Double bond geometry as shown.



CM 2

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS

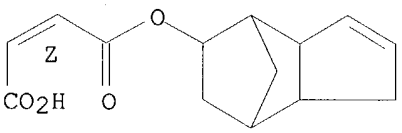


RN 64719-17-1 CAPLUS
CN 1,3-Isobenzofurandione, polymer with 1,2-ethanediol, (Z)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl 2-butenedioate (9CI) (CA INDEX NAME)

CM 1

CRN 29725-36-8
CMF C14 H16 O4

Double bond geometry as shown.

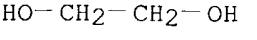


CM 2

CRN 27275-32-7
CMF (C8 H4 O3 . C2 H6 O2)x
CCI PMS

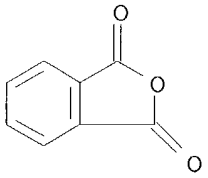
CM 3

CRN 107-21-1
CMF C2 H6 O2



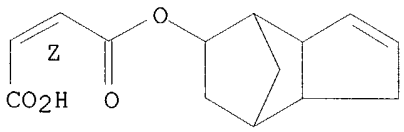
CM 4

CRN 85-44-9
CMF C8 H4 O3



IT **29725-36-8P**
RL: PREP (Preparation)
(preparation of)
RN 29725-36-8 CAPLUS
CN 2-Butenedioic acid (2Z)-, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl) ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L14 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
GI For diagram(s), see printed CA Issue.
AB Chemical-resistant thermosetting unsatd. **polyester** resin compns. were prepared by using a comonomer comprising a 1:1 adduct of dicyclopentadiene with itaconic acid or maleic acid. A resin was prepared from 0.01-0.5 equivalent of an adduct, e.g. I, 1 equivalent ep oxy resin (e.g. Araldite 6097, Epikote 1001, or Epikote 828), and 0.5-0 .99 equivalent unsatd. monobasic acid (e.g., cinnamic acid, methacrylic acid). A sheet of the unsatd. **polyester** cured with hydroquinone, diallyl phthalat e, triallyl cyanurate, Perbutyl Z, and Percumyl H at 120° for 3 hr had a deflection point (ASTM D 648-56) of 140°, and showed a weight increas e of 0.8% and retained 87% of its bending strength (initially 12.05 kg/c m2) after 1 month in acetone.
ACCESSION NUMBER: 1971:88447 CAPLUS
DOCUMENT NUMBER: 74:88447
TITLE: Thermosetting resins
INVENTOR(S): Nishigawa, Isamu; Noguchi, Shoji
PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd.
SOURCE: Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

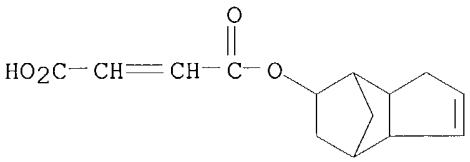
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 45027474	B4	19700908	JP	19660701

IT **27063-31-6**

RL: USES (Uses)
(polymers with epoxy resins and unsatd. monocarboxylic acids)

RN 27063-31-6 CAPLUS

CN Maleic acid, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-6-yl) ester (8CI) (CA INDEX NAME)



L14 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN

AB Unsatd. **polyester** resins prepared from 3a,4,5,6,7,7a-hexahydro - 4,7-methanoinden-6-yl monomaleate (from 3a,4,7,7a-tetrahydro-4,7-methanoindene and maleic acid) with (1) dipropylene glycol, (2) propylene glycol, (3) ethylene glycol, dipropylene glycol and adipic acid, and (4) glycerol are cured with PhCO2OBu-tert to give products having shrinkage (during the curing) 3.1-6.2%, deflection temperature (ASTM D 648-45T) 84-162°, tensile strength 3 kg/mm2 and volume resistivity 1011-12 ohm-cm.

ACCESSION NUMBER: 1970:478031 CAPLUS

DOCUMENT NUMBER: 73:78031

TITLE: Unsaturated **polyester** compositions with low shrinkage percentage

INVENTOR(S): Nakano, Mineo; Shijubutsu, Yuji; Tominaga, Akira; Aho, Masahiro

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

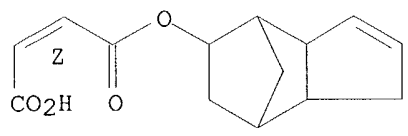
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 45010825	B4	19700418	JP	19660523

IT **29725-36-8**
RL: USES (Uses)
(unsatd. **polyesters** containing, with low shrinkage)

RN 29725-36-8 CAPLUS

CN 2-Butenedioic acid (2Z)-, mono(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl) ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



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---Logging off of STN---

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Executing the logoff script...

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	57.20	679.93

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-8.09	-8.09

STN INTERNATIONAL LOGOFF AT 16:22:50 ON 14 JUL 2004